

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Canceled).

Claim 2 (Currently Amended): An information recording apparatus for scrambling digital data broken up into predetermined reference units, appending predetermined additional information to the scrambled data, and recording the scrambled data on a recording medium, comprising:

a scramble processor configured to scramble ~~scrambling~~ digital data for each predetermined reference unit using a randomly generated scramble pattern; and

a recording controller configured to record ~~recording~~ scramble pattern information for specifying the scramble pattern used in scrambling by said scramble processor on the recording medium to be included in the additional information,

wherein the additional information has identification information for identifying the reference unit,

the scramble processor scrambles the identification information, and

the recording controller allocates the additional information at a head of each reference unit, and records the scramble pattern information on the recording medium between the identification information and the digital data.

Claims 3 and 4 (Canceled).

Claim 5 (Currently Amended): An apparatus according to claim 2, wherein said scramble processor scrambles the digital data for the reference unit ~~to be~~ written at an identical position of the recording medium using a different scramble pattern for each write.

Claim 6 (Canceled).

Claim 7 (Currently Amended): An information recording method for scrambling digital data broken up into predetermined reference units, appending predetermined additional information to the scrambled data, and recording the scrambled data on a recording medium, comprising:

a ~~the~~ scramble processing step of scrambling digital data for each predetermined reference unit using a randomly generated scramble pattern; and

a ~~the~~ recording control step of recording scramble pattern information for specifying the scramble pattern used in scrambling in the scramble processing step on the recording medium to be included in the additional information,

wherein the additional information has identification information for identifying the reference unit,

the scramble processing step scrambles the identification information, and

the recording control step includes the step of allocating the additional information at a head of each reference unit, and recording the scramble pattern information on the recording medium between the identification information and the digital data.

Claims 8 and 9 (Canceled)

Claim 10 (Currently Amended): A method according to claim 7, wherein the scramble processing step includes the step of scrambling digital data for the reference unit ~~to be~~ written at an identical position of the recording medium using a different scramble pattern for each write.

Claim 11 (Canceled).

Claim 12 (Currently Amended): An information reproduction apparatus for reproducing a recording medium on which digital data that have been broken up into predetermined reference units and have been scrambled respectively using randomly generated scramble patterns, and additional information, which comprises scramble pattern information appended to each digital data of the predetermined reference unit and containing scramble pattern information for specifying the scramble pattern used to scramble each piece of digital data of the predetermined reference unit and scrambled identification information for identifying the reference unit, and which are allocated at a head of each of the reference units, are recorded, comprising:

a descramble pattern generator configured to extract ~~extracting~~ the scramble pattern information from the additional information read from the recording medium, and generating a corresponding descramble pattern on the basis of the scramble pattern information; and

a descramble processor configured to descramble ~~descrambling~~ the digital data of the reference unit read from the recording medium on the basis of the descramble pattern generated by said descramble pattern generator.

Claim 13 (Canceled).

Claim 14 (Currently Amended): An information reproduction method for reproducing a recording medium on which digital data that have been broken up into predetermined reference units and have been scrambled respectively using randomly generated scramble patterns, and additional information, which comprises scramble pattern information appended to each digital data of the predetermined reference unit and containing scramble pattern

~~information~~ for specifying the scramble pattern used to scramble each piece of digital data of the predetermined reference unit and scrambled identification information for identifying the reference unit, and which are allocated at a head of each of the reference units, are recorded, comprising:

a ~~the~~ descramble pattern generation step of extracting the scramble pattern information from the additional information read from the recording medium, and generating a corresponding descramble pattern on the basis of the scramble pattern information; and

a ~~the~~ descramble processing step of descrambling the digital data of the reference unit read from the recording medium on the basis of the descramble pattern generated in the descramble pattern generation step.